

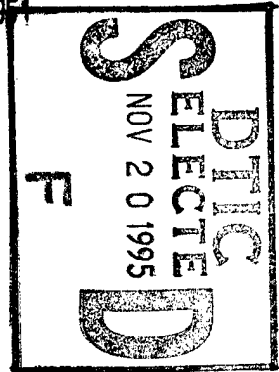


DEPARTMENT OF THE AIR FORCE  
HEADQUARTERS AIR FORCE CIVIL ENGINEER SUPPORT AGENCY

26 OCT 1995

FROM: HQ AFCEA/CES  
139 Barnes Drive, Suite 1  
Tyndall AFB, FL 32403-5319

19951114 078



SUBJECT: **Engineering Technical Letter (ETL) 95-2: Preparation of Requirements and Management Plan (RAMP) Packages for Military Construction (MILCON) Program Projects**

**1. Purpose.** This ETL provides guidance for the preparation of RAMP packages for executing MILCON projects. A RAMP consists of two documents: a Requirements Document (RD); and a Project Management Plan (PMP).

**2. Application.**

**2.1. Authority.** This ETL supports Chapter 5 of AFI 32-1023, *Design and Construction Standards and Execution of Facility Construction Projects*. It also implements guidance, responsibilities, and procedures outlined in the Memorandum of Understanding (Level 1) between the Headquarters United States Air Force Office of The Civil Engineer, and the Headquarters United States Corps of Engineers Director of Military Programs. Except for Medical and Family Housing projects, preparation of a RAMP is required in the MILCON process.

**2.2. Effective Date:** Immediately. Expires five years from date of issue.

**2.3. Recipients:** All organizations responsible for developing RAMPs for MILCON projects.

**2.4. Coordination with Key Organizations.** The generic RD and PMP were developed by a working group represented by most MAJCOMs, the US Army Corps of Engineers, and the Naval Facilities Engineering Command.

**3. Specific Requirements.** The RD and PMP provided as Attachments 3 and 4 to this ETL are intended to help individuals responsible for communicating facility needs to the Design Agent (DA). Their use is optional. However, fully communicating user requirements to the DA early in the design process is critical to achieving MILCON design goals and milestones. The generic RD and PMP are available from HQ AFCEE as modifiable electronic files in Microsoft® Word®, Version 6.0 for Windows™. Format is also optional.

DTIC QUALITY INSPECTED 8

**3.1.** The RD should provide enough detailed information that the DA can understand project requirements and negotiate design fees. The base completes the RD, and

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coordinates through the requiring MAJCOM for submission to the Air Force Design Manager (DM). Attachment 3 includes key information needed for the RAMP.

**3.2.** The PMP is a living document, used with the MOU referenced in paragraph 2.1. The PMP provides the general framework for the MILCON project and establishes specific strategies and milestones. The Design Manager (DM) develops the PMP together with the DA and the requiring MAJCOM. The PMP is finalized during the Pre-Definition Conference. Attachment 4 includes key information necessary for the RAMP.

**4. Point of Contact:** Major David Bullock, HQ AFCEE/CME, 8106 Chennault Road, Brooks AFB TX 78235-5318, DSN 240-5276, commercial (210) 536-5276, FAX 536-5276.



Edward E. Wilson, PE  
Acting Director of Technical Support

**4 Atch**

1. Distribution List
2. ETL Index
3. Generic Requirements Document (RD)
4. Generic Project Management Plan (PMP)

## DISTRIBUTION LIST

### DEPARTMENT OF DEFENSE

Defense Commissary Service	(1)	Defense Technical Information	
Director of Facilities		Center	(1)
Bldg 8400		ATTN: DTIC-FDA	
Lackland AFB TX 78236-5000		Alexandria VA 22034-6145	

AAFES/ATTN: CFE	(1)
PO Box 660320	
Dallas TX 75266-0320	

### SPECIAL INTEREST ORGANIZATIONS

IHS (A.A. DeSimone)	(1)	Construction Criteria Database	(1)
1990 M Street NW, Suite 400		National Institute of Bldg Sciences	
Washington DC 20036		1201 L Street NW, Suite 400	
		Washington DC 20005	

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Justification	
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Distribution /	
Availability Codes	
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A-1	

# ENGINEERING TECHNICAL LETTERS (ETL)

## SECTION A - CURRENT ETLs

ETL Number	Title	Date Issued
83-1	Design of Control Systems for HVAC Change No. 1 to ETL 83-1, U.S. Air Force Standardized Heating, Ventilating & Air Conditioning (HVAC) Control Systems	16 Feb 83  22 Jul 87
83-3	Interior Wiring Systems, AFM 88-15, Para 7-3	2 Mar 83
83-8	Use of Air-to-Air Unitary Heat Pumps	15 Sep 83
83-9	Insulation	14 Nov 83
84-7	MCP Energy Conservation Investment Program (ECIP)	13 Jun 84
86-4	Paints and Protective Coatings	12 May 86
86-5	Fuels Use Criteria for Air Force Construction	22 May 86
86-8	Aqueous Film Forming Foam Waste Discharge Retention and Disposal	4 Jun 86
86-9	Lodging Facility Design Guide	4 Jun 86
86-10	Antiterrorism Planning and Design Guidance	13 Jun 86
86-14	Solar Applications	15 Oct 86
86-16	Direct Digital Control Heating, Ventilation, and Air Conditioning Systems	9 Dec 86
87-1	Lead Ban Requirements of Drinking Water	15 Jan 87
87-2	Volatile Organic Compounds	4 Mar 87
87-9	Prewiring	21 Oct 87
88-2	Photovoltaic Applications	21 Jan 88
88-3	Design Standards for Critical Facilities	15 Jun 88
88-4	Reliability & Maintainability (R&M) Design Checklist	24 Jun 88
88-6	Heat Distribution Systems Outside of Buildings	1 Aug 88
88-9	Radon Reduction in New Facility Construction	7 Oct 88
88-10	Prewired Workstations Guide Specification	29 Dec 88
89-2	Standard Guidelines for Submission of Facility Operating and Maintenance Manuals	23 May 89
89-4	Systems Furniture Guide Specification	6 Jul 89
89-7	Design of Air Force Courtrooms	29 Sep 89
90-1	Built-Up Roof (BUR) Repair/Replacement Guide Specification	23 Jan 90
90-2	General Policy for Prewired Workstations and Systems Furniture	26 Jan 90
90-3	TEMPEST Protection for Facilities Change 1 Ref: HQ USAF/LEEDE Ltr dated 20 April 90, Same Subject	23 Mar 90

# ENGINEERING TECHNICAL LETTERS (ETL)

## SECTION A - CURRENT ETLs

ETL Number	Title	Date Issued
90-5	Fuel and Lube Oil Bulk Storage Capacity for Emergency Generators	26 Jul 90
90-6	Electrical System Grounding, Static Grounding and Lightning Protection	3 Oct 90
90-7	Air Force Interior Design Policy	12 Oct 90
90-8	Guide Specifications for Ethylene Propylene Diene Monomer (EPDM) Roofing	17 Oct 90
90-9	Fire Protection Engineering Criteria for Aircraft Maintenance, Servicing, and Storage Facilities	2 Nov 90
90-10	Commissioning of Heating, Ventilating, and Air Conditioning (HVAC) Systems Guide Specification	17 Oct 90
91-1	Fire Protection Engineering Criteria Testing Halon Fire Suppression Systems	2 Jan 91
91-2	High Altitude Electromagnetic Pulse (HEMP) Hardening in Facilities	4 Mar 91
91-4	Site Selection Criteria for Fire Protection Training Areas	14 Jun 91
91-6	Cathodic Protection	3 Jul 91
91-7	Chlorofluorocarbon (CFC) Limitation in Heating, Ventilating and Air-Conditioning (HVAC) Systems	21 Aug 91
93-1	Construction Signs	11 Mar 93
93-2	Dormitory Criteria for Humid Areas	13 Jul 93
93-3	Inventory, Screening, Prioritization, and Evaluation of Existing Buildings for Seismic Risk	18 Aug 93
93-4	Fire Protection Engineering Criteria - Automatic Sprinkler Systems in Military Family Housing (MFH)	11 Aug 93
93-5	Fire Protection Engineering Criteria - Electronic Equipment Installations	22 Dec 93
94-1	Standard Airfield Pavement Marking Schemes	5 Apr 94
94-2	Utility Meters in New and Renovated Facilities	10 Jun 94
94-3	Air Force Carpet Standard	10 Jun 94
94-4	Energy Usage Criteria for Facilities in the Military Construction Program	19 Aug 94
94-5	Fire Protection Engineering Criteria and Technical Guidance - Emergency Lighting and Marking of Exits	8 Nov 94
94-6	Fire Protection Engineering Criteria and Technical Guidance - Removal of Halogenated Agent Fire Suppression Systems	5 Dec 94

## ENGINEERING TECHNICAL LETTERS (ETL)

### SECTION A - CURRENT ETLs

ETL Number	Title	Date Issued
94-7	Affirmative Procurement Requirements for Construction and Other Civil Engineering Specifications	14 Dec 94
94-8	Design in Metric	14 Dec 94
94-9	Silicone Joint Sealants for Pavements	14 Dec 94
95-1	Halon 1301 Management Planning Guidance	12 May 95
95-2	Preparation of Requirements and Management Plan (RAMP) Packages for Military Construction (MILCON) Program Projects	26 Oct 95

# ENGINEERING TECHNICAL LETTERS (ETL)

## SECTION B - OBSOLETE ETLs

ETL Number	Date	Status
82-1	10 Nov 82	Superseded by ETLs 83-10, 86-1, 87-4
82-2	10 Nov 82	Superseded by AFEPPM 88-10
82-3	10 Nov 82	Superseded by ETLs 83-5, 84-2
82-4	10 Nov 82	Superseded by ETL 84-7
82-5	10 Nov 82	Superseded by ETLs 84-1, 86-13, 86-14
82-6	30 Dec 82	Cancelled
82-7	30 Nov 82	Cancelled
83-2	16 Feb 83	Superseded by ETL 84-3
83-4	3 Apr 83	Cancelled
83-5	5 May 83	Superseded by ETL 84-2
83-6	24 May 83	Cancelled
83-7	30 Aug 83	Cancelled
83-10	28 Nov 83	Superseded by ETL 86-1
84-1	18 Jan 84	Superseded by ETL 86-14
84-2	27 Mar 84	Superseded by ETL 94-4
84-3	21 Mar 84	Cancelled
84-4	10 Apr 84	Superseded by ETLs 86-7, 86-15, 87-5
84-5	7 May 84	Superseded by ETLs 84-8, 86-11, 86-18, 88-6
84-6	Not Issued	Cancelled/Not Used
84-8	19 Jun 84	Superseded by ETL 86-11
84-9	5 Jul 84	Superseded by ETL 88-7
84-10	1 Aug 84	Cancelled
88-5	2 Aug 88	Superseded by ETL 91-6
86-1	3 Feb 86	Superseded by ETL 87-7
86-2	5 Feb 86	Cancelled
86-3	21 Feb 86	Superseded by ETL 86-4
86-6	3 Jun 86	Superseded by ETLs 86-11, 86-18, 88-6
86-7	3 Jun 86	Superseded by ETL 86-15
86-11	3 Jul 86	Superseded by ETL 88-6
86-12	3 Jul 86	Superseded by ETL 90-2
86-13	18 Aug 86	Superseded by ETL 86-14
86-15	13 Nov 86	Superseded by ETL 87-5
86-17	17 Dec 86	Superseded by ETL 89-6
86-18	18 Dec 86	Superseded by ETL 88-6
87-3	12 Mar 87	Superseded by ETLs 87-6, ETL 88-5
87-4	13 Mar 87	Superseded by ETL 94-4
87-5	13 July 87	Superseded by ETL 94-2
87-6	21 Aug 87	Superseded by ETL-88-5
87-7	14 Oct 87	Superseded by ETL 89-1
87-8	19 Oct 87	Superseded by ETL 90-1

## ENGINEERING TECHNICAL LETTERS (ETL)

### SECTION B - OBSOLETE ETLs

ETL Number	Date	Status
88-1	5 Jan 88	Superseded by ETL 89-2
88-5	2 Aug 88	Superseded by ETL 91-6
88-7	24 Aug 88	Superseded by ETLs 90-3, 91-2
88-8	4 Oct 88	Superseded by ETL 91-7
89-1	6 Feb 89	Superseded by ETL 90-4
89-3	9 Jun 89	Superseded by ETL 93-5
89-5		Issued as ETL 90-7
89-6	7 Sep 89	Cancelled
90-4	24 May 90	Cancelled
91-8	24 Sep 91	Cancelled
91-3	14 Jun 91	Superseded by MIL HDBK 1008B, Jan 94
91-5	18 Jun 91	Superseded by ETL 94-5



## CONSTRUCTION TECHNICAL LETTERS (CTL)

### SECTION C - CURRENT CTLs

CTL Number	Title	Date Issued
88-2	DD Form 1354 Checklist	6 Jan 88
88-7	Constructibility Review Checklist	1 Nov 88
89-1	Thirty-Percent Design Submittal	10 Apr 89
89-2	MAJCOM Construction Management	30 May 89
89-3	Warranty and Guarantee Program	22 Sep 89
90-1	Management of the MILCON Planning and Execution Process	6 Mar 90
90-2	Definitions for Design Milestones	13 Mar 90
91-5	Fire Protection Engineering Criteria - Emergency Lighting and Marking of Exits	18 Jun 91

### SECTION D - OBSOLETE CTLs

CTL Number	Status
87-1	Superseded by CTL 88-3
88-1	Superseded by CTL 90-1
88-3	Superseded by ETL
88-4	Replaced by Electronic Data File and Documentation in PDC/WIMS
88-5	Superseded by CTL 90-2
88-6	Issuance Cancelled

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# Requirements Document (RD)

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**FY xx Project Title**

**Base xxxx**

**PDC AAAA12345**

Date

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# A. Introduction

## Purpose

*Additional information on the purpose, use, and clarification of the RD and companion Project Management Plan (PMP) can be found in the USAF Project Manager's Guide for Design and Construction (The Blue Book).*

The purpose of the RD is to provide the designer a basis for understanding the project requirements. It also provides the framework for executing this project through the team members. Active involvement by the user during all phases of design and construction is essential to insure the facility meets all functional requirements. The Design Agent (DA) is responsible for verifying the accuracy of the information contained within this document.

## Goals and Objectives

*This sample paragraph should briefly explain the project's purpose, and state User specific goals the designer should consider. Add and edit as required.*

The Air Force's goal is to design quality facilities that enhance mission effectiveness and protect the environment. A focus on quality must be maintained throughout project development and construction. The Air Force's objectives are to deliver a project on time, within available funds and in a safe manner, which satisfies the user's needs.

## B. Project Description

*This section should provide a concise project description, including any special requirements the designer should address and a general breakout by functional area. Describe what is important to the User. The DD Form 1391 could be used in lieu of this section only if sufficient detail is provided. Limit the length to no more than two pages, and use plain English in describing the work. This section should be prepared by the BCE Project Manager during an interview with the User Coordinator. Air Force criteria should be referenced and reviewed in preparing this section. The designer is responsible to verify the project description during the Project Definition process.*

### Project Statistics

Installation:	
Fiscal Year:	
Project Name:	
PDC Number:	
Host Command:	
Requiring Command:	
Category Code:	
Scope:	
Programmed Amount:	
Construction Cost Limitation:	
Operational Need Date:	
Facility Need Date:	

### Project Narrative

*Provide a general narrative explaining: the facility's purpose, types of activities it will support, and major area categories (i.e., admin, shop, storage, etc.). Special relationships with other facilities should be noted in this section.*

### Process Narrative

*Include process descriptions developed by the User if available. The user should emphasize special physical relationship between processes. These relationships may help the designer better understand the facility requirements.*

## B. Project Description (cont'd)

### Space Requirements

*The RD should not dictate a floor plan, but provide the designer a sense for the space required by functional type. Also include any special requirements. The intent of this paragraph is to indicate gross areas, and provide backup for the gross area on the DD Form 1391. This information will be fully developed by the designer during Project Definition. Applicable sections of MIL-HDBK 1190 or AFH 32-1084 (AFM 86-2) can be used.*

Space Type	Area (SF)	Remarks

### User Equipment

*Describe special equipment and support requirements and source of supply (GFE, third-party contracts, etc.). Not stating equipment requirements early could impact usable space and result in a design change. If specific requirements are unknown, state so, and give a general idea of what is expected based on work activities planned. Do not include typical office furniture, copiers, personal computers, etc.. Examples of items to include are kitchen, laboratory and special audiovisual requirements, special communication systems, and special computer system requirements. Describe special floor and wall space requirements for the equipment in the remarks column.*

	Description	Quantity	Remarks (supporting utilities, supply source)

## B. Project Description (cont'd)

### Special Requirements

*This list is a guide in developing user requirements for the designer to consider and should not be considered all-inclusive. These requirements should be verified and additional requirements identified during Project Definition. Where non-MILCON funds will be used in conjunction with the project (such as equipment purchases), provide specific details in the Remarks column. Include brand names of existing systems where appropriate. Where a waiver is required, specify in the remarks column.*

Special Requirements	Required Y / N / na	Remarks
Real estate acquisition		
Well permits		
Public utility easements		
Demolition		
Environmental concerns		
Recycle materials		
Special soil conditions		
Vehicle Parking		
Roofing Systems		
Doors (Vault, Overhead)		
Industrial waste sewage connection		
Unusual Mechanical Systems		
Unusual Ventilation Requirements		
Vibration Isolation		
Special Heating/Cooling Loads		
Temperature/Humidity Control		
Fire Protection Systems (i.e. AFFF)		
Special Piping (compressed air)		
Process Equipment/Systems		
Irrigation		
Landscaping and Exterior Signage		
Electrical		
Emergency Generator		
UPS		
Power Conditioning/PCCIE		
Lightning Protection		
Static Electricity Isolation		
Unique Electrical Equipment		
Special Grounding		
Special Power (400 HZ power)		
Unique Lighting (exterior, interior)		

## B. Project Description (cont'd)

### Special Requirements (cont'd)

Special Requirements	Required Y / N / na	Remarks
Communications/Antennas		
Special Computer Systems/Support		
Public Address or Intercom		
TEMPEST/HEMP/RF Shielding		
SCIF/Vaults (Class)		
Physical Security (fencing, IDS)		
Anti-terrorism		
Elevators		
Comprehensive Interior Design (CID)		
Furniture: - By This Contract		
- By Another Contract		
- Relocate Existing		
Pre-wired Workstations		
Sound Attenuation		
Structural Interior Design (SID)		
Unusual Clear Spans		
Special Structural (cranes, MHE)		
Unique Floor Loads or Needs		
Energy Compliance (10 CFR 435)		
EMCS		
Metering		
Life-Cycle Cost Studies		
Lighting / Envelope Screening		
Blast (if screening fails)		
Special Safety Systems		
Special OSHA requirements		
Americans with Disabilities Act Requirements (ADA)		
Visually-impaired vendors (GSA program)		
State Historical Preservation Office Review		
Recycling Considerations		



## B. Project Description (cont'd)

### Special Requirements (cont'd)

Special Requirements	Required Y / N / na	Remarks
Security clearances		
Special construction escort requirements		
Drawings and plans (CADD) <ul style="list-style-type: none"><li>- Design Drawings</li><li>- As-builts</li><li>- GIS</li></ul>		
Workaround Facilities		
Overseas travel		
Other (specify)		

The items listed above are to be used as a guide by the designer in developing user requirements. The list is not to be interpreted as an all-inclusive summary of project considerations. During the Project Definition (PD) phase of design, the designer must verify the accuracy of the requirements noted above, and any special requirements that may arise during the design process.

# C. Area Development Plan

*This section describes the project site, its relationship to the base, and supporting infrastructure. This section should be prepared with the assistance of the base community planner. Refer to the Base Comprehensive Plan for assistance.*

## Project Relationship to the Base Comprehensive Plan

### Site Selection

*Explain the project's functional relationships to surrounding facilities and any unique siting requirements. To develop this information, have the base community planner verify the project's relationship to the BCP, or any changes from the BCP. Show on an area plan or preferably on a Composite Plan as discussed below. Attach a copy of the approved site plan if not provided in the DD Form 1391 package in Attachment 1.*

### Future Development

*Show on an Area Plan (Attachment 2) other projects planned in the near vicinity over the next five years (title and FY) or sited nearby. Recommend a narrative indicating how this project may affect future siting options, potential traffic or utility service requirements in the area. This information can be coded as future developments on the Composite Plan as noted below.*

### Architectural Compatibility

*Refer to Attachment 4.*

## Site Development

*Discuss features of the area as they relate to this project. See section D, Environmental Planning, for factors that could affect siting. This discussion is easily presented on a Composite Plan (Attachment 2), with narrative as needed and coded to show proposed project and planned future developments. Examples include, but are not limited to:*

### Opportunities

*Highlight any special considerations enhancing the site selection on the Composite Plan.*

- Existing open space, topography, vegetation, tree cover, and views.
- Facilities scheduled for demolition.
- Prevailing winds, solar orientation, and local climate.
- Site access.
- Separation of auto, pedestrian, and service traffic.
- Anticipated growth and expansion.

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## C. Area Development Plan (cont'd)

### Constraints

*Note any special restrictions impacting the site on the Composite Plan.*

- Airfield clearance criteria.
- Explosive quantity-distance criteria.
- Site plan approval by the DoD Explosive Safety Board
- Fire equipment access.
- AICUZ noise criteria or sound attenuation requirements.
- Building height limitations.
- Set back criteria from roads, airfield surfaces, curbs, sidewalks, etc.
- Environmental contamination.
- Public Utilities
- Utility capacities and excess capacities
- Established pedestrian and vehicular traffic patterns
- Available water flows and pressure data
- Flood plain maps

## D. Environmental

*This section should highlight any potential environmental concerns. Timely completion of the EA, environmental permits, surveys, and other environmental issues is crucial to the successful execution of all MILCON projects. Since the EA is typically not completed prior to submission of the RD, try to communicate any issues which could impact the project. This section should be written by the base environmental manager. If the Environmental Compliance portion of the DD Form 1391 is completed, it can be used in lieu of this section; however, ensure all known permits and approving authority are identified. The OPR for each required action should be identified in the Remarks section. Also identify non-MILCON fund sources.*

Environmental Permits	Required Y / N / na	Remarks
Air Quality		
Water Quality		
Water Connection		
Wastewater		
Stormwater		
Solid Waste		
Hazardous Waste (RCRA)		
Environmental Construction		
Other (specify)		

Hazardous Substance Surveys	Required Y / N / na	Remarks (date of last survey)
Asbestos		
Lead Based Paint		
PCB		
Radon		
IRP Sites		
Toxic industrial waste		
Radiological		
Heavy Metals		
Other (specify)		

Known Abatement Considerations	Required Y / N / na	Remarks
Asbestos		
Lead Based Paint		
PCB		
Radon		
Hazardous Waste (RCRA)		
Heavy Metals		
Other (specify)		

## D. Environmental (cont'd)

Environmental Planning	Required Y / N / na	Remarks
AF Form 813/814		
Environmental Assessment (EA)		
Environmental Impact Statement		
AICUZ/Noise Siting		
Natural Resources Protection		
Clean Air Conformity Analysis		
Pollution Prevention		
Wetlands		
Flood Plains		
Threatened/Endangered Species		
Archeological/Historic		
Coastal Zone Management		
Coastal Barrier Resources		
Wellhead Protection		
Cropland/Grazing Land		
Underground Storage Tanks		
Fuel Dispensing/Tank Farms		
Fuel Cell Maintenance Hangars		
Engine Test Cells		
Corrosion Control Facilities		
Oil-Water Separators		
Industrial pre-treatment		
AFFF Containment		
Fire Training Facilities		
Water Main Connections		
Sanitary Sewer Connections		
Wastewater Treatment Facilities		
Hazardous material storage		
Biological Wastes		
Solid Waste Incinerators		
Central Heating Plants/Large		
Sedimentation Controls		
Other (specify)		

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# E. Requirements Document Agreement

*The RD may be prepared by a different organization than the PMP. As a minimum, the base environmental manager and the Chief Engineer should sign this agreement. MAJCOMs may require additional signatures at this point. Check and provide as necessary.*

## Agreement Statement

The undersigned agree to follow the provisions of this Requirements Document. Each activity will focus its efforts and influence to provide complete, comprehensive, up-front planning and to meet the objectives of designing and constructing this project to fulfill user needs and to meet Air Force quality, safety, and reliability expectations, with minimum changes, within budget, and within schedule. Changes to this plan must be coordinated with and approved by the undersigned or their designated representatives.

## Signatures

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BASE ENVIRONMENTAL MANAGER

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CHIEF ENGINEER

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## **F. Attachments**

- 1. DD Form 1391 and AF Form 1178**
- 2. Maps, Plans and Special Studies**
- 3. Sketches, Photos and Definitive Drawings**
- 4. Installation Design Guidelines and Standards**

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# Attachment 1

## DD Form 1391 and AF Form 1178

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*Insert a complete, dated copy of the DD Form 1391 package. Also attach a copy of the AF Form 1178, if available.*



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# Attachment 2

## Maps, Plans and Special Studies

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*This section should include pertinent base comprehensive plan maps, utility maps, IRP site information, AICUZ information etc.*

### Area Map

*Scale 1:24,000 or as appropriate to show proximity to heavy population centers and general topographical features. Excerpts from state or city road maps are recommended. Highlight the following:*

- Base boundaries.
- Main Gate.
- Off-base borrow/spoil areas or routes to them (if applicable).
- Construction debris disposal sites.
- Distance and direction to closest commercial airport (if applicable).

### Base Map

*Scale to fit 8-1/2" by 11" size with no more than one fold. Show the following items:*

- Main Gate.
- Fire Station.
- Security Police.
- Base Civil Engineering.
- Haul routes.
- Off-limits/controlled access areas.
- Known hazardous waste sites (if applicable).
- Areas available to the contractor for staging and storage.
- Borrow/spoil areas.
- Project site.

### Area Plan

*Recommend scale of 1:100, fold if necessary to 8-1/2" by 11" size. Recommend this map be a composite.*

- Show locations for all future development projects (title and FY) within the area.
- Indicate special land use categories, including AICUZ contours and explosive safety clear zones.
- Note preferred construction routes and potential contractor staging areas.

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# Attachment 2 (cont'd)

## Maps, Plans and Special Studies

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### Composite Plan

*Most bases have current, accurate information available with utility sizes and excess capacities; if so, include it here. If not, provide a source and point of contact for further information. Recommend scale of 1:50, fold if necessary to 8-1/2" by 11" size. Show the following items. If necessary use separate drawings for different utility systems; however, a Composite Plan provides the best information.*

- Existing contours.
- Proposed facility footprint.
- Pavements included in the project and existing.
  - Streets, parking lots, sidewalks.
  - Runways, taxiways, aprons, overruns, shoulders.
- Bridges and fences.
- Structures.
- Railroads.
- Sanitary and industrial wastewater sewers (size, location, and manhole inverts).
- Storm sewers, drainage ditches.
- Natural gas service lines.
- Communication and telephone ducts and lines.
- Electrical service lines.
- Steam and hot water lines.
- Chilled water lines.
- POL lines.
- Fire hydrants and mains.
- Limits on contractor work area.
- Graphic symbols of site considerations:
  - Views.
  - Prevailing winds.
  - Solar orientation.
  - Tree cover.
- Water service mains:
  - Potable.
  - Non-potable.

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# Attachment 3

## Sketches, Photos and Definitive Drawings

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*Provide any sketches, photos, or definitive drawings which will help the designer understand the project; however, recommend not including a floor plan unless critical relationships must be understood.*

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# Attachment 4

## MAJCOM/Installation Design Guidelines and Standards

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*The purpose of this section is to incorporate key elements from the Base Comprehensive Plan and MAJCOM/Installation Design Guides with knowledge from base personnel most familiar with installation problems and systems. This section should clarify MAJCOM/Installation requirements. This information can be included by reference if the DA is provided copies of referenced standards.*

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# Project Management Plan (PMP)

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**FY xx Project Title**

**Base xxxx**

**PDC AAAA12345**

**Date** \_\_\_\_\_

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\* *To be provided by the Design Agent's Project Manager, when applicable to the project.*

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# A. INTRODUCTION

## Purpose

*These instructions are intended for use by both Air Force and the Design Agent / Construction Agent (DA/CA) Project Managers who have a responsibility in the development of PMPs for MILCON projects. All instructions throughout the PMP are in italics. The specific instructions in each section are intended to serve as a reference during development of the section and are shown in italics at the beginning of each section. All instructions are to be deleted when the final PMP is prepared. A draft PMP is to be included with the final RD when submitted to the Air Force Design Manager (DM). The baseline PMP will be finalized by the Project Management Team at the Pre-Definition Conference. Additional reference information on the PMP requirements can be found in the US Air Force Project Manager's Guide to MILCON Design and Construction (The Blue Book). For those projects requiring intensive management, the DM/CM and the DA/CA will establish a special management team. This special management team's duties, responsibilities, goals, and procedures will be outlined in the PMP.*

This Project Management Plan (PMP) provides the general framework, and establishes specific strategies and milestones, for execution of this MILCON project.

## Joint Air Force / Design Agent/Construction Agent (DA/CA) PMP

The contents and format of this PMP are intended to serve the needs of both the US Air Force and the DA/CA members of the Project Management Team. Attachment 5 of the PMP, when applicable, will be provided by the Design Agent's Project Manager, and will become a permanent integral part of the Plan. All other portions of the PMP will be prepared by the Air Force in draft form, and finalized by the Project Management Team prior to the Pre-Definition Conference (PDC). The PMP will be distributed within ten days after the PDC to all attendees.

## Responsibilities and Authorities

Responsibilities and authorities for joint US Air Force/US Army Corps of Engineer project management are established in the Level I Memorandum of Understanding (MOU) between HQ US Air Force and HQ US Army Corps of Engineers, and in the 3 Jan 94 Level II MOU between their respective major subordinate commands.

Responsibilities and authorities for joint US Air Force/US Naval Facilities Engineering Command (NAVFAC) project management will be established during the PDC. Prudent management lends itself to following established relationships between NAVFAC Engineering Field Divisions and US Air Force customers.

# B. Acquisition Strategy

## Acquisition Plan

### Design Phase

### REQ'D

### REMARKS

Partnering in Design

☐

\_\_\_\_\_

Design Standardization:

Unique (No Standard Used)

☐

\_\_\_\_\_

Site Adapt

☐

\_\_\_\_\_

Definitive Drawings

☐

\_\_\_\_\_

Standard Design Criteria

☐

\_\_\_\_\_

Functional Modules

☐

\_\_\_\_\_

Charrette (as basis for PD)

☐

\_\_\_\_\_

Designer:

A-E

☐

\_\_\_\_\_

H-L (In-House)

☐

\_\_\_\_\_

Contractor for Design/Build

☐

\_\_\_\_\_

Other (specify) \_\_\_\_\_

☐

\_\_\_\_\_

Other (specify) \_\_\_\_\_

☐

\_\_\_\_\_

### Procurement Phase

### REQ'D

### REMARKS

Real Estate Acquisition

☐

\_\_\_\_\_

Delivery Method:

Traditional Bid

☐

\_\_\_\_\_

Negotiated Procurement

☐

\_\_\_\_\_

Design/Build

☐

\_\_\_\_\_

Evaluated Total Cost Method

☐

\_\_\_\_\_

Other (specify) \_\_\_\_\_

☐

\_\_\_\_\_



## B. Acquisition Strategy (cont'd)

### Procurement Phase (cont'd)      REQ'D      REMARKS

#### Competition:

Full, Open Competition

SDB

8(a)

Other (specify) \_\_\_\_\_



#### Contract Type:

Firm Fixed Price

Fixed Price Award Fee

Fixed Price Incentive Fee

Cost Plus Fixed Fee

Cost Plus Award Fee

Cost Plus Incentive Fee

Letter Contract

Other (specify) \_\_\_\_\_



### Construction Phase

*This section is intended to identify any special services or considerations required of the Design Agent.*

Partnering in Construction

Construction Phasing

Acceptance/Performance Tests

Construction Constraints

Availability of GFE

Split Funding Sources

Systems O&M Manuals

Training

Special Post Occupancy Inspections

Other (specify) \_\_\_\_\_



### Acquisition Strategy Comments

## C. Project Schedule

*The Base will establish the operational and facility need dates. The Project Management Team will develop an estimated project schedule prior to the Pre-Definition Conference. The schedule may be revised as situations dictate. All deliverables included in the Design Cost Estimate shall have milestones established for them in the project schedule, wherever applicable. The baseline schedule will be included in this section of the Project Management Plan. The requiring MAJCOM will establish MAJCOM goals and guidance.*

Project Goals	Date
<b>Base</b>	
Operational Need Date	
Facility Need Date	
Environmental Assessment Complete	
Other (specify)	
<b>MAJCOM</b>	
(insert MAJCOM goals here)	

## C. Project Schedule (cont'd)

[illegible]

# D. Project Management Plan Agreement

*The Project Management Plan Agreement will be signed at the Pre-Definition Conference, when the PMP is finalized by the Project Management Team. Page number to be assigned by preparer when PMP is finalized. In many cases, the Air Force DM and the Air Force CM are the same person, the Air Force DM and the Requiring MAJCOM PM are the same person, and the Requiring and Host MAJCOM PM are the same person.*

## Agreement Statement

The undersigned agree to follow the provisions of this Project Management Plan for the MILCON project identified in the Requirements Document (RD). Changes to this plan must be coordinated with and approved by the undersigned or their designated representatives.

## Signatures

\_\_\_\_\_  
SIGNATURE DM/CM

\_\_\_\_\_  
DATE

\_\_\_\_\_  
SIGNATURE PM (DA/CA)

\_\_\_\_\_  
DATE

\_\_\_\_\_  
SIGNATURE BCE PM

\_\_\_\_\_  
DATE

\_\_\_\_\_  
SIGNATURE USING AGENCY/BASE

\_\_\_\_\_  
DATE

\_\_\_\_\_  
SIGNATURE REQUIRING MAJCOM PM

\_\_\_\_\_  
DATE

\_\_\_\_\_  
SIGNATURE HOST MAJCOM PM

\_\_\_\_\_  
DATE

\_\_\_\_\_  
SIGNATURE BASE ENVIRONMENTAL MGR

\_\_\_\_\_  
DATE

\_\_\_\_\_  
SIGNATURE USING AGENCY/MAJCOM

\_\_\_\_\_  
DATE

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## **E. Attachments**

- 1. Design Cost Estimate Worksheet**
- 2. Project Management Team**
- 3. Base Support Team**
- 4. Special Projects**
- 5. Design Agent Supplemental Information**

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# Attachment 1

## Design Cost Estimate Worksheet

*Attach the Design Cost Estimate Worksheet here. Only those items essential to project execution should be selected, and selections must be consistent with any information provided in the initial Design Instruction from the Requiring MAJCOM.*

# DESIGN COST ESTIMATE WORKSHEET

**\*\*NOT TO BE PROVIDED TO A-E\*\***

*This worksheet is meant to establish preliminary and baseline costs only and is not intended to track design costs over time. The DM should indicate only those items that are essential, and selections must be consistent with any information provided in the initial Design Instruction from the Requiring MAJCOM. Preliminary cost is the cost of services requested by the Air Force. DA to provide estimated cost for those services and other services the DA believes necessary. This is due ten days after PDC. The baseline cost reflects agreement between the Air Force and the DA as to the services required and is based on negotiations with the A/E or in-house designers. This is the services and cost against which cost performance will be measured. This is due five working days after negotiations.*

	REQUESTED	PRELIMINARY COSTS		APPROVED	BASELINE COSTS	
		H-L	A-E		H-L	A-E
<b>I. BASIC DESIGN SERVICE COSTS</b>						
<b>A. DI to Project Definition</b>						
1. Pre-Design Conference						
2. Project Definition (10%)						
3. Project Definition Review (15%)						
4. Mailing (2-Day Delivery)						
5. Charrette						
6. Site Survey						
Subtotal						
<b>B. Project Definition to 100%</b>						
1. Plans, Specs & Design Analysis						
a. Preliminary (30%)						
b. Interim Submittal (60%)						
c. Prefinal Submittal (90%)						
2. Design Reviews						
a. Preliminary (30%)						
b. Interim Submittal (60%)						
c. Prefinal Submittal (90%)						
d. Finals, RTA						
3. Permits						
4. BCOE Review *						
5. Cost Estimate						
a. Preliminary (30%)						
b. Interim Submittal (60%)						
c. Prefinal Submittal (90%)						
6. Mailing (2-Day Delivery)						
Subtotal						
<b>C. 100% through Award</b>						
1. Plan-in-Hand						
2. Reproduction						
3. Advertisement (IFB/RFP)						
4. Contract Award Actions						
Subtotal						
Total Cost of Basic Design Services						

DATE: \_\_\_\_\_

\* BCOE -Bidability, Contractability, Operability, and Environmental Review

# DESIGN COST ESTIMATE WORKSHEET (cont'd)

**\*\*NOT TO BE PROVIDED TO A-E\*\***

	REQUESTED	PRELIMINARY COSTS		APPROVED	BASELINE COSTS	
		H-L	A-E		H-L	A-E
<b>II. OPTIONAL DESIGN SERVICE COST</b>						
<b>A. Project Development</b>						
1. RD Development						
2. 1391 Development						
3. Other (specify) _____						
<b>B. Additional Service</b>						
1. Value Engineering						
2. Design Reviews On Board						
a. Preliminary(30%)						
b. Interim Submittal (60%)						
c. Prefinal Submittal (90%)						
3. Sr Level Review Mtgs						
4. AF PD Briefing						
5. Surveys						
a. Asbestos						
b. Lead Based Paint						
c. Utility						
d. Topographic						
e. Other						
6. Studies						
a. Access						
b. Drainage						
c. Security						
d. Other						
7. Renderings						
8. Model						
9. CID						
10. Transportation TCX Rev *						
11. Energy Compliance Studies (10 CFR 435)						
12. Fire Protection Plan						
13. FAR Report **						
14. Partnering						
15. Other (specify) _____						
Subtotal						
Grand Total Cost of Basic and Optional Services						

DATE: \_\_\_\_\_

\* TCX - Technical Center of Expertise

\*\* FAR - Foundation Analysis Report



# Attachment 2

## Project Management Team

*Provide detailed information on Project Management Team members, including name, position or project role, organization, mailing address, phone number, etc. As a minimum, the Team will consist of, but not be limited to, the following: User, Using agency, Base Civil Engineering personnel, environmental management function, Major Commands, DM/CM, MSC (optional), and DA/CA. In many cases, the Air Force DM and Air Force CM are the same person, and the Requiring and Host MAJCOM Project Managers are the same person.*

### PROJECT MANAGEMENT TEAM MEMBERS

#### User Representative

NAME:  
POSITION:  
ORGANIZATION:  
MAILING ADDRESS:  
TELEPHONE:  
    COMMERCIAL:  
    DSN:  
    FAX:  
    E-Mail

#### Base Civil Engineer Project Manager

NAME:  
POSITION:  
ORGANIZATION:  
MAILING ADDRESS:  
TELEPHONE:  
    COMMERCIAL:  
    DSN:  
    FAX:  
    E-Mail

#### Environmental Management Function Representative

NAME:  
POSITION:  
ORGANIZATION:  
MAILING ADDRESS:  
TELEPHONE:  
    COMMERCIAL:  
    DSN:  
    FAX:  
    E-Mail

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# Attachment 2

## Project Management Team (cont'd)

### MAJCOM Project Managers

Requiring

Host

---

NAME:

POSITION:

ORGANIZATION:

MAILING ADDRESS:

TELEPHONE:

COMMERCIAL:

DSN:

FAX:

E-Mail

### Air Force Design Manager / Construction Manager

DM

CM

---

NAME:

POSITION:

ORGANIZATION:

MAILING ADDRESS:

TELEPHONE:

COMMERCIAL:

DSN:

FAX:

E-Mail

### Design Agent/Construction Agent (DA/CA) Division Program Manager

DA

CA

---

NAME:

POSITION:

ORGANIZATION:

MAILING ADDRESS:

TELEPHONE:

COMMERCIAL:

DSN:

FAX:

E-Mail

# Attachment 2

## Project Management Team (cont'd)

### Design/Construction Agent (DA/CA) Project Managers

DA

CA

NAME:

POSITION:

ORGANIZATION:

MAILING ADDRESS:

TELEPHONE:

COMMERCIAL:

DSN:

FAX:

E-Mail

### DA/CA Technical Managers

Design

Construction

NAME:

POSITION:

ORGANIZATION:

MAILING ADDRESS:

TELEPHONE:

COMMERCIAL:

DSN:

FAX:

E-Mail

### Designer (A-E) Project Manager (Optional)

NAME:

POSITION:

ORGANIZATION:

MAILING ADDRESS:

TELEPHONE:

COMMERCIAL:

DSN:

FAX:

E-Mail

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# Attachment 3

## Base Support Team

*Provide information similar to that for the Project Management Team for representatives who will be expected to play a role at project review meetings due to the nature of project requirements. Examples include, but are not limited to: base communications, security, interior design, fire protection, safety, bioenvironmental, contracting, legal, medical, logistics, supply and information management.*

# Attachment 4

## Special Projects

Most Air Force MILCON projects follow the same basic processes described in this guidance package; however, there are several types of specific projects you may encounter which deviate slightly from these basic processes. These special type projects include:

- Base Realignment and Closure (BRAC) directed MILCON projects
- Medical Construction and Renovation projects
- Military Family Housing (MFH) projects
- Nonappropriated Fund (NAF) projects
- Energy Conservation Investment Projects (ECIP)
- Air Force Reserve (AFRes) MILCON projects
- P-341 (Emergency Construction) funded projects

Some of the differences in managing these projects are noted below. Where not specifically addressed, contact the Requiring MAJCOM Civil Engineer staff for guidance and advice.

### Medical Projects:

Responsibilities and Authorities for joint US Air Force/US Army Corps of Engineers project management are in the Level I Memorandum of Understanding (MOU) between HQ US Air Force, Office of the Civil Engineer, and the US Army Corps of Engineers, Director of Military Construction dated 8 Feb 91 and MIL-STD 1191. Responsibilities and Authorities for Joint US Air Force/US Naval Facilities Engineering Command (NAVFAC) project management are delineated in MIL-STD 1191.

Except for Air Force BRAC and Medical Line funded projects, funding for AF medical projects is provided by OSD/Health Affairs (HA) Defense Medical Facilities Office (DMFO). The acquisition process for medical projects varies slightly from the typical AF MILCON project. All medical projects, regardless of funding source, requires OSD/HA approval.

HQ AFCEE/CMM is the AF DM/CM for all medical projects and is available to provide guidance to the BCE in the preparation of the RD & PMP. The Regional Health Facilities Offices (RHFO) are available to assist the BCE in preparing the RD & PMP input (i.e. initial project scope requirements based upon DoD Medical Space Planning Criteria, DD Form 1391, etc). Follow-on medical requirements and criteria will be provided via the HQ AFCEE/CMM and RHFO throughout the project design and construction process. All AF medical MILCON projects (DoD, BRAC, AF) will follow the procedures and criteria noted in MIL-STD 1191.

For AF DoD medical projects, the following PMP and RD items are not required:

- Acquisition Strategy
- Design Cost Estimate Worksheet
- AF Form 1178
- Sketches, Photos, and Definitive Drawings of the proposed project (Atch 3 of the RD)

### **Family Housing Projects:**

For Military Family Housing projects, the Air Force is typically the DA and CA. The Air Force will assume the roles and responsibilities normally accomplished by the COE and NAVFAC.

### **Nonappropriated Fund Projects:**

For NAF projects, the Air Force is typically the DA and CA, and assumes the roles and responsibilities normally accomplished by the COE and NAVFAC.

Funding is usually appropriated and provided as a total lump sum to be used to support both design and construction. That means as the design costs increase, the amount of funds to support the construction effort decreases by the same amount. NAF projects are approved and funded through the Air Staff NAF board.

NAF projects require a feasibility and cost analysis study to be accomplished in advance of the design effort. This study is accomplished by the base NAF office, and usually requires input and support from the base and MAJCOM Civil Engineer staff. This study establishes the basis for design and is a part of the project approval documentation.

### **Air Force Reserve (AFRes) Projects:**

AFRes MILCON projects follow the same process as those described in this RD and PMP guidance package with the following exceptions:

- AFRes design and award goals and milestones are accelerated by one year from the standard MILCON cycle. As an example, FY97 projects are developed using the FY96 milestones (AFRes FY97 projects should be 35% design completed by 15 Jan 95, vice 15 Jan 96 milestone for AF FY97 MILCON projects).
- When AFRes MILCON projects are designed and RTA a year in advance of the apportionment year, typically they must be "pulled off the shelf" and reviewed for adequacy and functionality in advance of advertisement. This second look review ensures the base users and missions are still applicable and the project meets the user's intended needs. The cost to accomplish this design review scrub must be accounted for in the negotiations for design efforts between the DM and DA.

### **Energy Conservation and Investment Projects:**

ECIP projects are funded from a separate appropriations than typical MILCON. The Air Force MAJCOM Civil Engineer staff will decide on the appropriate DA and CA roles. Depending upon the scope, complexity, and location of the project, the COE and/or NAVFAC may be contracted to provide the DA/CA support for these projects.

# Attachment 5

## Design Agent / Construction Agent Supplemental Information

*Items in this attachment are to be provided and completed by the DA/CA Project Manager, when applicable to the project. If this section is not applicable to the project, include this page in the PMP with a statement that the element has been evaluated and determined to be not applicable to the project.*